US FPA RECORDS CENTER REGION 5

Monthly Oversight Report 65
44728 AES [46526 RAC]
ACS NPL Site
Griffith, Indiana
May 5, 2006 – June 2, 2006

1



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Chicago, Illinois 60606-7302

Tel: (312) 346-3775 Fax: (312) 346-4781

USEPA/AES

American Chemical Service, Inc. RAO (0057-ROBE-05J7)

BVSPC Project 44728 BVSPC File C.3 June 9, 2006

Black & Veatch Special Projects Corp.

Mr. Kevin Adler U.S. Environmental Protection Agency 77 W. Jackson Boulevard (SR-6J) Chicago, Illinois 60604-3590

Subject:

Monthly Oversight Summary Report

No. 65 for May 2006

Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 65 for May 2006 for the American Chemical Service, Inc. Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email (campbelllm@bv.com).

Sincerely,

BLACK & VEATCH Special Projects Corp.

Larry M. Campbell, P.E.

Site Manager

Enclosure

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Lary Campbook

# Monthly Oversight Summary Report No. 65 ACS Superfund Site TO 057, 44728.238 (AES) [WA57, 46526.238 (RAC)]

**Reporting Period:** Month of May (May 6 through June 2, 2006) **BVSPC O/S Dates:** May 11 and June 2, 2006 (Mr. Gailey)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	3	Respondent's General Contractor
U.S. Environmental Protection Agency	1	Federal Regulatory Agency
Indiana Department of Environmental Management	1	State Regulatory Agency
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Austgen	1	General Contractor
PSA Environmental	2	Drilling Contractor
Ryan	1	General Contractor

## **Construction Activities**

## **Major Activities:**

- Montgomery Watson Harza continued operating the groundwater treatment plant, the insitu soil vapor extraction systems, and the air sparge systems.
- Montgomery Watson Harza and PSA Environmental conducted the post-application sampling following the fourth full-scale In-Situ Chemical Oxidation Treatment injections.
- Montgomery Watson Harza replaced the scrubber packing in Thermal Oxidizer 2.
- Montgomery Watson Harza held a site operations and maintenance status meeting on June 2.

# **Activities Performed:**

- Observed MWH continue to operate the groundwater treatment plant (GWTP) at a flow-demand rate of 22 to 40 gpm, treating 831,047 gallons during 629 of the 672 hours (94%) in the May period (April 28—May 26). MWH reported that groundwater was pumped to the plant from all trench and well sources.
- MWH reported that the GWTP sand filter malfunctioned during the first week of May. MWH also reported that pumps P-104 and P-105 underwent routine maintenance. Both pumps were cleaned using an acid wash.

- MWH reported that the new air compressor to replace the existing main GWTP air compressor was delivered to the site on June 1. The compressor is anticipated to be installed during the week of June 12.
- MWH reported that it measured water levels in all monitoring locations on May 22 to 24 as part of the monthly monitoring plan.
- Observed MWH continue to operate the Onsite Containment Area (ONCA) Still Bottoms Pond Area (SBPA) and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems, processing vapors through thermal oxidizer units 1 and 2 (thermox 1 and 2).
- MWH reported that it conducted the monthly compliance sampling of thermox 1 and 2 on May 24.
- MWH reported that thermox 1 operated for 328 of the 672 hours (49%) in the May period, processing 1,000 cfm of vapors from the ONCA SBPA ISVE system, collecting vapors from the same 30 (of the total 46) ISVE wells that have been used during previous reporting periods.
- MWH reported that thermox 1 was shut down for approximately 50% of the month to accommodate maintenance activities. In order to maintain a stable chamber temperature, the burner valve was replaced with one that had a larger orifice. A hole on the scrubber ductwork was also repaired. On May 29, the unit shut down for unknown reasons. On May 31, the main gas regulator was replaced. The unit was restarted on June 2.
- MWH reported that thermox 2 operated for 620 of the 672 hours (92%) in the May period, processing 2,000 cfm of vapors collected from all 42 OFCA ISVE wells and aeration tank T-102.
- Observed MWH replace the scrubber packing in thermox 2 on May 11.
- MWH reported that it pumped 25 gallons of free product from ISVE well SVE-53 in the SBPA on both May 3 and May 15, for a total of 50 gallons. Product was collected in a drum at the surface and transported to the GWTP and transferred to oil holding tank T-6.
- MWH reported that in early May, air was being injected into the SBPA through Group 3 of five wells (SVE-44, -59, -77, -80, and -84), each flowing at about 20 cfm. MWH reported that air injection was switched to Group 1 wells (SVE-50, -54, -73, -79, and -81) on May 24. MWH reported that air will be injected using this Group 1 set of wells through late June.
- MWH reported that PSA Environmental mobilized to the site on May 9 to conduct postapplication sampling following the fourth round of chemical-oxidation injections. Sampling was completed on May 12, and PSA Environmental demobilized from the site.
- Observed MWH conduct the post chemical-oxidation injections application sampling, collecting 12 soil samples and 12 water samples. Seven of the water samples were collected through the drill pipe of the direct push rig. The other five samples were collected from temporary monitoring wells
- Completed monthly oversight report (with field notes and photographs) for the April reporting period. Submitted Monthly Oversight Summary Report No. 64 to EPA on May 9
- Site Manager provided periodic reports of field activities to the EPA TOPO via telephone and E-mail.

• Participated in 1 operation and maintenance (O&M) meeting at MWH's Chicago office (June 2).

Topics of Concern: None

Concern Resolution: None

# **Upcoming Activities:**

- MWH to continue operating the GWTP and the OFCA and ONCA SBPA ISVE and air sparge systems.
- MWH to continue operating Group 3 air injection wells in the SBPA.
- MWH to monitor odors in the ACS break room.
- MWH to continue pumping product from selected ONCA SBPA dual phase extraction wells.
- MWH will remove the existing air compressor and install a replacement air compressor during the week of June 12.
- MWH to conduct Lower Aquifer Phase 3 Investigation, including installation of additional long-term groundwater monitoring network wells and installation of pumps in existing wells in the area of MW53.
- MWH will continue construction coordination meetings at the site when field activities warrant such meetings.
- MWH will continue monthly O&M meetings to report on operation of active treatment systems.

Signature:	Chad Gailey	Date:	June 9, 2006	
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# SITE STATUS MEETING MINUTES FOR JUNE 2, 2006 MEETING AMERICAN CHEMICAL SERVICE, NPL SITE GRIFFITH, INDIANA

**MEETING DATE:** 

Friday, June 2, 2006

**MEETING TIME:** 

10:00 a.m.

MEETING LOCATION: MWH Chicago Office

ATTENDEES:

Chad Gailey – Black & Veatch

Larry Campbell – Black & Veatch (via phone)

Kevin Adler – U.S. EPA Peter Vagt – MWH Chris Daly – MWH

Lee Orosz – MWH (via phone)

David Powers - MWH Justin Finger - MWH

#### TOPICS:

## SITE STATUS

#### General Site Health and Safety

There have been no health and safety incidents since the last meeting held on May 5<sup>th</sup>. As summer approaches, rising temperatures and humidity may present health and safety risks. Also, condensation from piping in the Groundwater Treatment Plant (GWTP) has created potential slip hazards on the plant floor. Biological hazards such as bees, mosquitoes, and poison ivy will become more prevalent as the weather gets warmer.

On June 1, 2006, the new compressor for the plant was offloaded using a forklift. No health and safety incidents occurred while this work was performed.

## Groundwater Treatment Plant (GWTP) Status

The GWTP operated 94 percent of the time from April 28<sup>th</sup> to May 26<sup>th</sup> (629 out of 672 hours). During the first week of May, the sand filter malfunctioned. The problem was corrected and the plant was fully operational again within a few days of the incident. Also, during this past month, pumps P-104 and P-105 underwent routine maintenance. Both pumps were cleaned using an acid wash.

A new air compressor to replace the existing main GWTP air compressor was delivered to the site on June 1, 2006. The compressor is anticipated to be installed during the week of June 12, 2006.

## Off-Site Area/SBPA ISVE Systems

The Off-Site Area In-situ Soil Vapor Extraction (ISVE) System was operational for 92 percent of the time from April 28 to May 26, 2006 (620 out of 672 hours). All 42 ISVE wells and 3 air sparge wells are active. Downtime occurred because Thermal Oxidizer 2 (ThermOx 2) was shut down to replace the scrubber packing.

The Still Bottoms Pond Area (SBPA) ISVE system was operational for 49 percent of the time from April 28 to May 26, 2006 (328 out of 672 hours). Air Injection Well Group 3 (SVE-44, SVE-59, SVE-77, SVE-80, and SVE-84) and associated ISVE wells were active until May 24<sup>th</sup>. On May 24<sup>th</sup>, operation was switched to Well Group 1 (SVE-50, SVE-54, SVE-73, SVE-79, and SVE-81).

The SBPA ISVE system was down for approximately 50% of the month to accommodate maintenance activities on Thermal Oxidizer 1 (ThermOx 1). In order to maintain a stable chamber temperature, the burner valve was replaced with one that had a larger orifice. A hole on the scrubber ductwork was also repaired. On May 29, the unit shut down for unknown reasons. On May 31, the main gas regulator was replaced. The unit was restarted on June 2.

## Interaction with ACS Facility and Community

During a conversation with Tom Froman of ACS, he stated that no problems were noted regarding the active treatment systems located on the ACS facility.

#### **Current Issues**

Post-application sampling following the fourth round of chemical-oxidation injections was conducted from May 9-12, 2006. MWH subcontracted PSA Environmental to perform drilling activities. MWH collected 12 soil samples and 12 water samples. Seven of the water samples were collected through the drill pipe of the direct push rig. The other five samples were collected from temporary monitoring wells. The results from this event will be summarized in a forthcoming report.

The Phase 2 Lower Aquifer Investigation Report has been completed and was delivered to the Agencies during the meeting. The report discusses the results of the investigation and also proposes a third phase of work. This third phase includes installing a remediation system and two monitoring wells. A summary of the Lower Aquifer Investigation and the report contents is attached to these meeting minutes.

#### LOOK AHEAD

#### Field Events

- ISVE System Monitoring June 22, 2006 (tentative)
- Field Activities for Lower Aguifer Phase 3 TBD

## Reports

- Lower Aquifer Phase 2 Investigation Report June 2006
- Active Treatment Systems Quarterly Report, 1st Quarter 2006 June 2006
- Chemical Oxidation Fourth Full-Scale Application Report June 2006
- March 2006 Groundwater Monitoring Report June 2006

#### Health & Safety Look Ahead

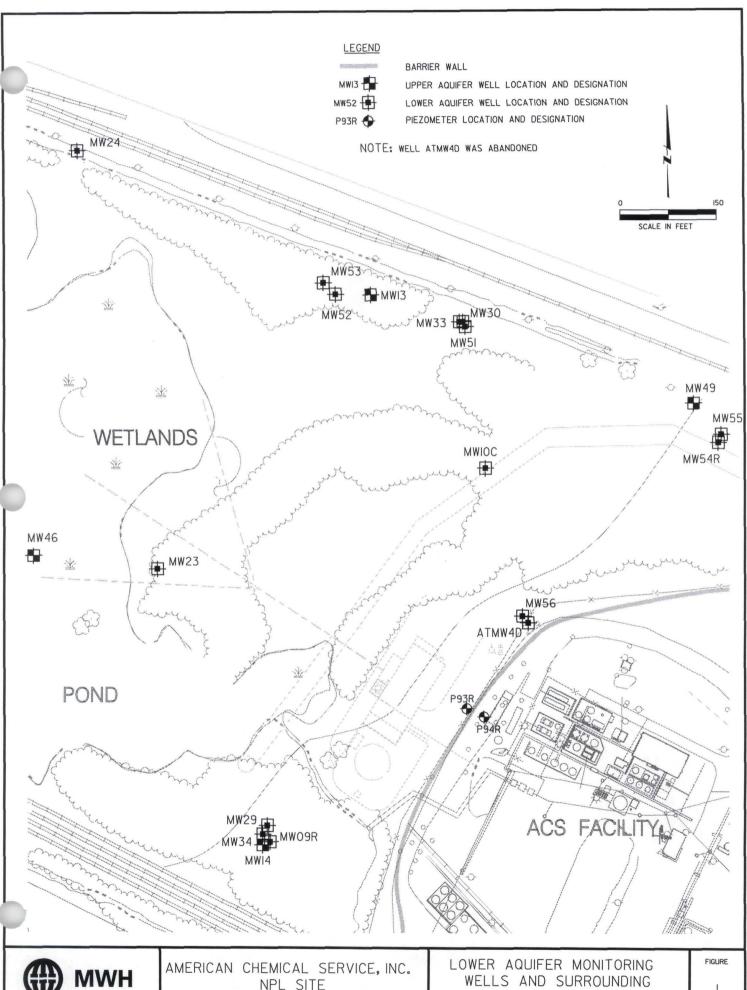
- Special precautions should be taken to avoid slip hazards associated with condensation from pipes in the GWTP.
- Special precautions should be taken to avoid heat stress associated with increasing summer temperatures.
- Special precautions should be taken to avoid biological hazards such as bees, mosquitoes, and poison ivy.
- Proper PPE should be worn during monthly ISVE system monitoring.

# **Future Meetings**

Monthly Site Status Meeting – Thursday, July 13, 2006, 12 p.m. at the ACS site. If the meeting cannot take place on this date, it will be moved to Friday, July 14, 2006 at 10 a.m. in the MWH Chicago office.

# Lower Aquifer Investigation Summary

- We have just finished Phase 2 of the Lower Aquifer Investigation at the ACS Site. The Phase 2 Report proposes a third Phase of work to install a remediation system and two monitoring wells.
- Figure 1 shows the monitoring well locations on the north side of the ACS Site.
- Benzene is the signature CoC for the Site. There have been several localized detections of benzene in the lower aquifer throughout the past 10 years.
- These impacts (at MW9, MW10, and ATMW4D) occurred in the upper part of the lower aquifer and resulted from incomplete surface seals at the well locations.
- Localized pumping systems have dealt effectively with these as localized impacts.
- The MW53 benzene impact is at the bottom of the lower aquifer. The results (**Figure 2**) are systematic and suggest an ongoing source, probably beneath the ACS Site.
- Objective 1 of Phase 2 was to define the extent of benzene in the lower aquifer in the vicinity of MW53. **Figure 6** shows the benzene impact extending approximately 200 feet east-to-west at the bottom of the lower aquifer.
- Objective 2 was to determine the hydraulic properties of the lower aquifer in the impacted zone so that we could design the appropriate remedial system: Phase 2 included a three-day pumping test (Appendix G) and groundwater modeling (Appendix H).
- While P&T is not often our first choice for remediating a groundwater impact, it makes sense here.
- The GWTP will operate for the long-term and it has excess capacity, particularly for groundwater with ppb concentrations.
- Phase 3 includes installing a P&T Remedial System and two sentinel monitoring wells further downgradient (north) of the ACS Site.
- We propose to install pumps in 4 lower aquifer wells (LA12, LA13, LA14, and MW 53) with manifold system and subsurface piping system to bring extracted water back to the GWTP.
- Spacing between the wells is approximately 50 feet. The benzene impact would be capture by pumping wells two-at-a-time, at about 5 gpm each. See attached **Figure H-8**.
- **Figure 9** shows the proposed locations two new monitoring wells, further downgradient from MW53. These will be added to the long-term groundwater monitoring network.



GRIFFITH, INDIANA

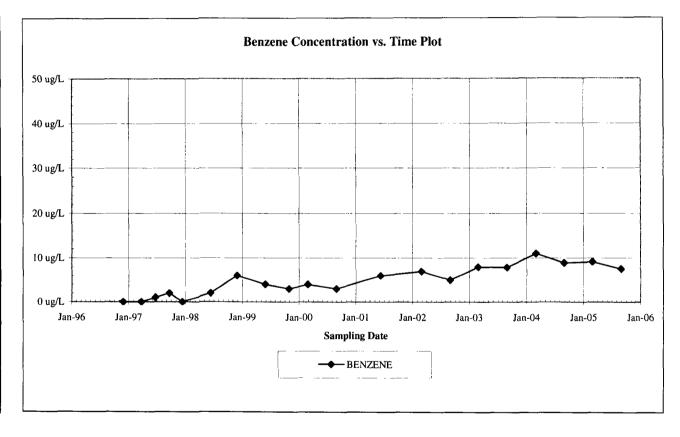
NPL SITE

WELLS AND SURROUNDING FEATURES MAP

Plot Date04-MAY-2008461008\$

Figure 2
Concentration vs. Time Plot for
Lower Aquifer Monitoring Well MW53
American Chemical Service NPL Site, Griffith Indiana

DATE	BENZENE
BASELINE	10
August-89	
May-90	
January-95	
December-96	BDL
March-97	BDL
June-97	1 ug/L
September-97	2 ug/L
December-97	BDL
June-98	2 ug/L
December-98	6 ug/L
June-99	4 ug/L
November-99	3 ug/L
March-00	4 ug/L
September-00	3 ug/L
June-01	6 ug/L
March-02	7 ug/L
September-02	5 ug/L
March-03	8 ug/L
September-03	7.9 ug/L
March-04	11 ug/L
September-04	8.9 ug/L
March-05	9.2 ug/L
September-05	7.6 ug/L



#### Notes:

ug/l - micrograms per liter

BDL = Below the Detection Limit

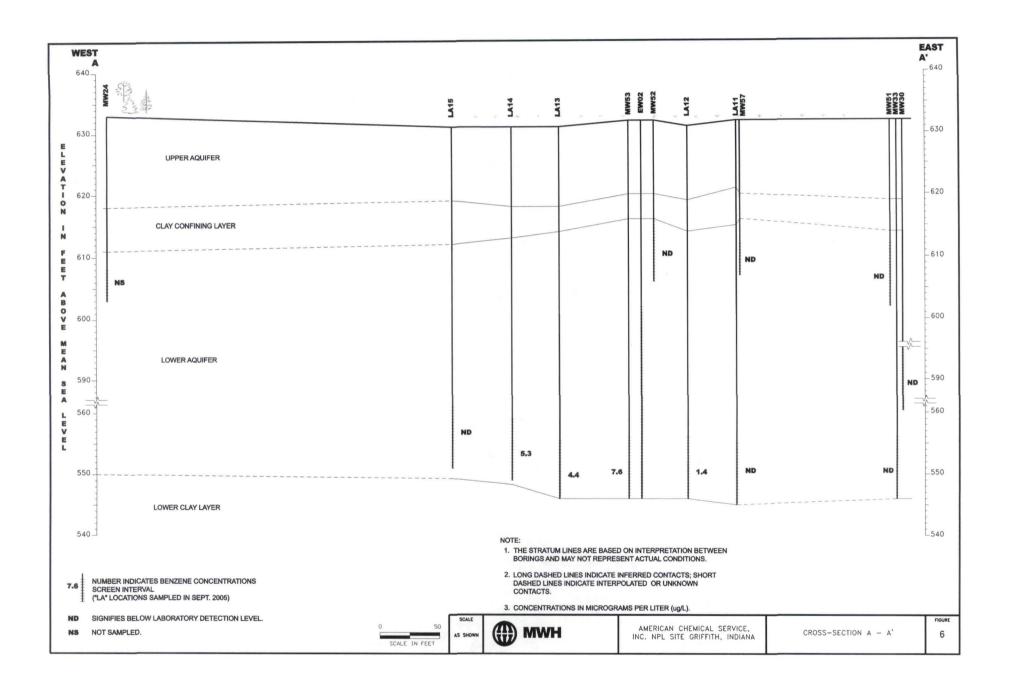




Figure H-8. Modeled 20-year capture zone created by two wells each pumping at 5 gpm (MW53 and LA-14).



1134 Photo 86-14 looking 5 at Second GAL Tank boing moved 175 W Jackson Street Inte position · 200 Break for Lung disather them in 50s mostly Clean Present are the 1240 Lind over 1244 Photo 86-15 /wing 5 at New GAE tanks in place main 1245 Photo 86-16 100long 5W ct Lee massing for new hoses to connect now GAL Taun must must 1300 Left 5.4 Dr lay mon. Crosz mult By Plane Health & SMAETY, Wee Cirise Specking April 11 - Carbon Charge Cut 401 Vaccin Truck ; harry Cambell was 12 - Remove the 2 - 10,000 gal Carbon TANK (GAC) 21 Crown MOUD INSTALLED SHING DAY Albert A hitch w 12 Confrie Space Permit
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odaslo6 Up Coming Events (Condinuel) 5 Bample face Excestoney Chen On wells ! NPSCO Paier Company will be and Silve to Replyce of Locally Trans fermen -XepaRTS ! 1 System manufacing May 24 Laver Aguiled Ens May ENDMAY Chemical Oxontion June Par HAS Concerns / Lock Atteach Sumpling South, PPE Traffle - De energize Plant During Transfermen Eachunge. NEXT Meeting June 2, 2006 @ mult's Sottice.

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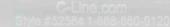
9:55 APRIVED @ MOUNTS Effice Larenteel @ 175 Jackson St Sut 1900 for the monthly Boonstruction/Site Status Meetings. Present for the meet are the following; Pete Vaut must in Person Chris Daly MWH in Posson Justin Finger must in Persin Drue Powers mut in Person Lee Crosz mut Via Plane Kevin Adler EDA in Persons Larry Crapbell BUSPC Via Phone MUA painer out the following 3 items: · Site Status Meeting Aperide (July 2,20x6) · Phant + ISVE Perforance Date + Charts (10 pages) · Lower Aguster Investigation Summary Report. First idem on the Agrender was the topic of Houlf A SAPETY. Lee Orosz. - No Health 1 Sureto issues to Report. Provided Reminders · Tempoline rispan Coccano

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(4<u>3</u>) Charles Oldelos · Countricual) the New burner weit -· Therm Cx1 went Down with the burner Preblem Durring the Monorcal Day week end, · Mut's has ordered a new Diaphram for Therm Ox 1. -OFE S. te SVE · Operated 92% · Therm Ox 2 Practing was Replaced ON 5/1406 · Suitcher Purpose Coroup from 3 to 1. The swill Happen After each monthly Correlabler man borgain Ecout. which Tock Place on 5/24/06, -Note: barry Compbell Request the Switch of SVE Groups be acknowledger not the month operating tables, -MULL APREED! -Lower Aguster Investigation - Refer to the bound Aguiler Trustigada Surry (Draft) Datal June 2, 2006 a MWH Provale the Keport as well that I Took ou me Chiel to

(Continued) EPA Recovered 3 copies Gest wil 2 mas more perhapsement Buth 3th to be placed by the repositely ours approval, MUH Preposeel A phase III to the OFP Site plume to North Northwest area @ must3 Comora toxing well 573). The Phase III would install a Pump and treat system to Captere the offsite Benzene by Pumping 5 ppm from LA wells now muss with the installation of Two Continued wells must at pressy can the super Proporty Pres the CAMPDIAN MATICAGI BAILLINE Note Kevin Adler Questional the Selbury - Institutional Control Represented e Wetlands in Dact Stobenson & Tripet e Access Apperement w/ Augus · Access Agreement and CAMADIAN National Ton Korbisk Kowin Request are Provide the Record

(50) Continued Hours to Start Constructors
refusition this Monitor. Next Meeting is tendered Schoolabel for July 13, 2004
ONSite & 12:00, jf this Slips fell Book is briefly July 14, 2006 (a mosts affice.





Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 87 Photo #1

Date: 5-11-06 Time: 0927

Photographer: Chad Gailey

Description: Photo facing west from inside the

treatment plant of Lee & Tim removing

the old ChemOx packing.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Photo #2 Roll: 87 Date: 5-11-06 Time: 0945

Photographer: Chad Gailey

Description: Photo facing south @ 1002 Reder Rd.,

Justin Finney logging the boring.



Site: American Chemical Service, Inc. 44728 AES [46526 RAC] Proj. #:

Photo #3 Roll: 87 Time: 0946 Date: 5-11-06

Photographer: Chad Gailey Description: Photo facing south @ 1002 Reder Rd. Tim Carroll scanning the boring for

VOCs.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC] Roll: 87

Photo #4 Date: 5-11-06 Time: 1000

Photographer: Chad Gailey

Description: Photo facing north @ 1002 Reder Rd @

boring D65 of impacted soil depth of 19'.



Site: American Chemical Service, Inc. 44728 AES [46526 RAC] Proj. #:

Photo #5 Roll: 87 Date: 5-11-06 Time: 1015

Photographer: Chad Gailey

Description: Photo facing northwest @ 1002 Reder

Rd of PSA Bobby Jones decontaminating the sampling barrel.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC] Roll: 87

Photo #6 Date: 5-11-06 Time: 1016

Photographer: Chad Gailey

Description: Photo facing north @ D6C5 1002 Reder

Rd of Tim Carroll pulling a VOC sample @ 19' to 20'.





Site: American Chemical Service, Inc. 44728 AES [46526 RAC] Proj. #:

Photo #7 Roll: 87 Time: 1058 Date: 5-11-06

Photographer: Chad Gailey

Description: Photo facing southwest @ D605, 1002

Reder Rd. Tim Carroll collecting a

VOC sample.

Site: American Chemical Service, Inc. 44728 AES [46526 RAC] Proj. #:

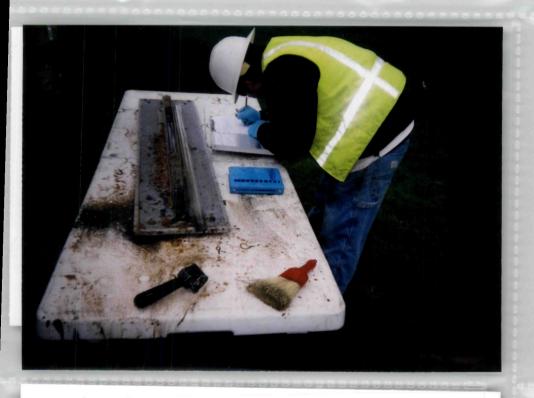
Photo #8 Roll: 87 Date: 5-11-06 Time: 1135

Photographer: Chad Gailey

Description: Photo facing southeast @ D604, 1002

Reder Rd. PSA Advance Push Probe

and MWA log the soils.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 87 Photo #9 Time: 1142 Date: 5-11-06

Photographer: Chad Gailey

Description: Photo facing southwest. D604 of Justin

logging the impacted soil @19.5' below

land surface.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC] Roll: 87

Photo #10 Date: 5-11-06 Time: 1335

Photographer: Chad Gailey

Description: Photo facing south @ D609A of MWH

logging the boring. IDEM providing

oversight.



Site: American Chemical Service, Inc. Proj. #: 44728 AES [46526 RAC]

Roll: 87 Photo #11 Date: 5-11-06 Time: 1530

Photographer: Chad Gailey

Description: Photo facing east @ D604 of Justin

Finney filling VOA vials.